

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	2208	thrombin adj inhibitor	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:44			0
2	BRS	L2	143	(thrombin adj inhibitor) same prodrug	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:45			0
3	BRS	L3	1887347	kit or composition	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:45			0
4	BRS	L4	6	2 same 3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:45			0
5	BRS	L5	38	melagatran	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:52			0
6	BRS	L6	13	melagatran same prodrug	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:52			0
7	BRS	L7	4	(melagatran same prodrug) same (kit or composition)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:55			0
8	BRS	L8	0	thrombotic adj condtion	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:55			0
9	BRS	L9	22723	thrombosis	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:55			0
10	BRS	L10	1	9 same (6 or 4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:57			0
11	BRS	L11	93918	surgery	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:56			0
12	BRS	L12	2592	9 same 11	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:56			0

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(FILE 'HOME' ENTERED AT 15:02:44 ON 27 MAY 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'  
ENTERED AT

15:03:08 ON 27 MAY 2003

L1 10904 S THROMBIN INHIBITOR  
L2 514 S MELAGATRAN  
L3 11005 S L1 OR L2  
L4 68 S L3 (P) PRODRUG  
L5 2981974 S KIT OR COMPOSITION  
L6 0 S L4 (P) L5  
L7 263691 S THROMBOSIS  
L8 277 S THROMBOTIC CONDITION  
L9 263784 S L7 OR L8  
L10 13 S L9 (P) L4  
L11 8 DUPLICATE REMOVE L10 (5 DUPLICATES REMOVED)  
L12 21370 S L9 (P) SURGERY  
L13 3 S L11 (P) L12  
L14 0 S L13 NOT L11

=> log y

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
13	BRS	L13	0	12 same (6 or 4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:57			0
14	BRS	L14	15	gustafsson adj david.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:59			0
15	BRS	L15	1	14 and (6 or 4)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/27 14:59			0

FILE 'HOME' ENTERED AT 15:02:44 ON 27 MAY 2003

=> file medline caplus biosis embase scisearch agricola		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 15:03:08 ON 27 MAY 2003

FILE 'CAPLUS' ENTERED AT 15:03:08 ON 27 MAY 2003  
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 COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC. (R)

FILE 'EMBASE' ENTERED AT 15:03:08 ON 27 MAY 2003  
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FILE 'SCISEARCH' ENTERED AT 15:03:08 ON 27 MAY 2003  
 COPYRIGHT 2003 THOMSON ISI

FILE 'AGRICOLA' ENTERED AT 15:03:08 ON 27 MAY 2003

=> s thrombin inhibitor  
 L1 10904 THROMBIN INHIBITOR

=> s melagatran  
 L2 514 MELAGATRAN

=> s l1 or l2  
 L3 11005 L1 OR L2

=> s l3 (p) prodrug  
 L4 68 L3 (P) PRODRUG

=> s kit or composition  
 L5 2981974 KIT OR COMPOSITION

=> s l4 (p) l5  
 L6 0 L4 (P) L5

=> s thrombosis  
 L7 263691 THROMBOSIS

=> s thrombotic condition  
 L8 277 THROMBOTIC CONDITION

=> s l7 or l8  
 L9 263784 L7 OR L8

=> s l9 (p) l4  
 L10 13 L9 (P) L4

=> duplicate remove l10  
 DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'  
 KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
 PROCESSING COMPLETED FOR L10  
 L11 8 DUPLICATE REMOVE L10 (5 DUPLICATES REMOVED)

=> d l11 1-8 ibib abs

L11 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:879541 CAPLUS  
 DOCUMENT NUMBER: 137:362345  
 TITLE: Oral-direct thrombin inhibitors  
 AUTHOR(S): Crowther, Mark A.  
 CORPORATE SOURCE: McMaster University, Hamilton, ON, Can.

SOURCE: Fundamental and Clinical Cardiology (2003), 46(New  
Therapeutic Agents in Thrombosis and Thrombolysis (2nd  
Edition)), 265-271  
CODEN: FCCAEH; ISSN: 1067-5264  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English

AB A review. Current strategies for the treatment and prevention of venous  
\*\*\*thrombosis\*\*\* require a mix of parenteral and oral therapies that  
frequently require lab. monitoring. Oral-direct \*\*\*thrombin\*\*\*  
\*\*\*inhibitors\*\*\* have the potential to simplify antithrombotic therapy;  
these agents produce a predictable anticoagulant response so that lab.  
monitoring may be unnecessary. Ximelagatran, the oral direct  
\*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\* in the most advanced stage of  
development, is a \*\*\*prodrug\*\*\* of \*\*\*melagatran\*\*\*, an  
active-site-directed inhibitor of thrombin. In phase II studies,  
ximelagatran has been evaluated as thromboprophylaxis in patients  
undergoing elective hip or knee replacement surgery and in patients with  
nonvalvular atrial fibrillation. The drug has also been studied in  
patients with acute venous \*\*\*thrombosis\*\*\*. In each case,  
ximelagatran appears to be at least as safe and effective as current  
antithrombotic interventions. Phase III studies with ximelagatran for  
these indications are currently underway. If ximelagatran lives up to its  
initial promise, it has the potential to revolutionize the prevention and  
treatment of \*\*\*thrombosis\*\*\*.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 8 MEDLINE  
ACCESSION NUMBER: 2002416506 MEDLINE  
DOCUMENT NUMBER: 22161009 PubMed ID: 12170516  
TITLE: [Prophylaxis of postoperative thromboembolism. New  
alternatives to low-molecular-weight heparin].  
Profylax mot postoperativ tromboembolism. Nya alternativ  
till lagmolekylart heparin.  
AUTHOR: Bergqvist David; Siegbahn Agneta  
CORPORATE SOURCE: Avdelningen for klinisk kemi, Akademiska sjukhuset,  
Uppsala.. david.bergqvist@kirurgi.uu.se  
SOURCE: LAKARTIDNINGEN, (2002 Jul 11) 99 (28-29) 3039-41.  
Journal code: 0027707. ISSN: 0023-7205.  
PUB. COUNTRY: Sweden  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: Swedish  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200209  
ENTRY DATE: Entered STN: 20020813  
Last Updated on STN: 20020914  
Entered Medline: 20020913

AB For somewhat more than a decade low molecular weight heparins have  
dominated in the pharmacological prevention of postoperative venous  
thromboembolism. At present there are some new methods of potential  
interest both as prophylactic substances but also to better understand the  
pathophysiology of deep vein \*\*\*thrombosis\*\*\*. These are inhibition  
of factor VII a/tissue factor complex (NAP, Nematode Anticoagulant  
Protein), inhibition of activated factor X (the synthetic pentasaccharide  
fondaparinux) and thrombin inhibition ( \*\*\*melagatran\*\*\* and its oral  
\*\*\*prodrug\*\*\* ximelagatran). They have been shown to be effective in  
high risk orthopaedic surgery. They have to show their place in the  
prophylactic arsenal in comparison with low molecular weight heparins  
(effect, safety, mode of administration, cost-effectiveness).

L11 ANSWER 3 OF 8 MEDLINE DUPLICATE 1  
ACCESSION NUMBER: 2002388952 MEDLINE  
DOCUMENT NUMBER: 22132572 PubMed ID: 12137410  
TITLE: BIBR-1048 Boehringer Ingelheim.  
AUTHOR: Mungall Dennis  
CORPORATE SOURCE: The Miami Project to Cure Paralysis, Department of  
Neurological Surgery, University of Miami School of  
Medicine, Lois Pope Life Center, FL 33101, USA..  
Thertch@aol.com  
SOURCE: Curr Opin Investig Drugs, (2002 Jun) 3 (6) 905-7. Ref: 13  
Journal code: 100965718. ISSN: 1472-4472.

PUB. COUNTRY: England: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200302  
ENTRY DATE: Entered STN: 20020725  
Last Updated on STN: 20030227  
Entered Medline: 20030226

AB BIBR-1048, a \*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\* and an orally-active  
\*\*\*prodrug\*\*\* of BIBR-953ZW, is under development by Boehringer  
Ingelheim as a potential antithrombotic agent [331881]. By 1999,  
BIBR-1048 was in phase II clinical trials for thromboembolism and the  
prevention of stroke due to atrial fibrillation [331881]; by April 2002,  
proof-of-principle had been demonstrated in phase II trials in deep vein  
\*\*\*thrombosis\*\*\* [446554]. In July 2001, the company revealed that an  
IND was expected to be filed for BIBR-953ZW in 2002 [415884].

L11 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:154081 CAPLUS  
TITLE: Mechanisms of action and principal pharmacological  
properties of the new antithrombotic agents  
AUTHOR(S): Samama, M. M.; Gerotziafas, G. T.  
CORPORATE SOURCE: Service d'hematologie biologique, Hotel-Dieu, Paris,  
75004, Fr.  
SOURCE: Lettre du Pharmacologue (2002), 16(6), 154-160  
CODEN: LPEHAV; ISSN: 0984-452X  
PUBLISHER: Edimark S.A. (Vivactis Media)  
DOCUMENT TYPE: Journal  
LANGUAGE: French

AB Fondaparinux (Arixtra) and ximelagatran (Exanta) represent a real  
innovation for the prevention and treatment of deep vein  
\*\*\*thrombosis\*\*\*. They are completely synthetic and specific inhibitors  
of a unique serine protease of blood coagulation. Fondaparinux is the  
first of a new class of selective antithrombin dependent indirect factor  
Xa inhibitors, which inhibit thrombin generation. Ximelagatran, the  
\*\*\*prodrug\*\*\* of \*\*\*melagatran\*\*\*, is a unique new antithrombotic  
drug, since it is the first clin. used direct orally acting reversible  
\*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\*. This review summarizes the history  
of pentasaccharide and ximelagatran, their mol. structures, their  
mechanism of action and their pharmacokinetics.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:851154 CAPLUS  
DOCUMENT NUMBER: 135:371637  
TITLE: Synthesis of thiochromane derivatives for use as  
thrombin inhibitors  
INVENTOR(S): Andersson, Kjell; Inghardt, Tord; Karlsson, Olle;  
Linschoten, Marcel; Nystroem, Jan-erik; Sunden, Gunnel  
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.  
SOURCE: PCT Int. Appl., 93 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001087879	A1	20011122	WO 2001-SE1052	20010514
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

EP 1283837 A1 20030219 EP 2001-930400 20010514  
R: AT, BE, CH, DE, DK, FR, GB, GR, IT, LI, LU, NL, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
NO 2002005504 A 20021115 NO 2002-5504 20021115  
PRIORITY APPLN. INFO.: SE 2000-1803 A 20000516  
WO 2001-SE1052 W 20010514  
OTHER SOURCE(S): MARPAT 135:371637  
GI

/ Structure 1 in file .gra /

AB Synthesis of thiochromane derivs. (I) (R1 = halo; R2 = H, halo, alkoxy; Y = S=O, SO2) for use as \*\*\*thrombin\*\*\* \*\*\*inhibitors\*\*\* is disclosed. Thus, I (R1 = Cl, R2 = H, Y = SO2) (II) is prepd. in 8 steps from 4-chloro-2-methoxythiophenol, Et bromopropanoate and paraamidinobenzylamino azetidinecarboxylate. II in thrombin clotting time assay shows an IC50TT of > 0.05.upsilon.M. I are useful as \*\*\*prodrugs\*\*\*, competitive inhibitors of trypsinlike proteases, such as thrombin, and in particular in the treatment of conditions where inhibitors of thrombin is required (e.g. \*\*\*thrombosis\*\*\* ) or as anticoagulants.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 8 MEDLINE DUPLICATE 2  
ACCESSION NUMBER: 2001301777 MEDLINE  
DOCUMENT NUMBER: 21127175 PubMed ID: 11228340  
TITLE: The direct thrombin inhibitor melagatran and its oral prodrug H 376/95: intestinal absorption properties, biochemical and pharmacodynamic effects.  
AUTHOR: Gustafsson D; Nystrom J; Carlsson S; Bredberg U; Eriksson U; Gyzander E; Elg M; Antonsson T; Hoffmann K; Ungell A; Sorensen H; Nagard S; Abrahamsson A; Bylund R  
CORPORATE SOURCE: Department of Cardiovascular Pharmacology, AstraZeneca R&D Molndal, S-431 83, Molndal, Sweden..  
david.gustafsson@astrazeneca.com  
SOURCE: THROMBOSIS RESEARCH, (2001 Feb 1) 101 (3) 171-81.  
Journal code: 0326377. ISSN: 0049-3848.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200105  
ENTRY DATE: Entered STN: 20010604  
Last Updated on STN: 20030314  
Entered Medline: 20010531

AB Suboptimal gastrointestinal absorption is a problem for many direct \*\*\*thrombin\*\*\* \*\*\*inhibitors\*\*\*. The studies presented herein describe the new oral direct \*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\* H 376/95, a \*\*\*prodrug\*\*\* with two protecting residues added to the direct \*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\* \*\*\*melagatran\*\*\*. Absorption properties in vitro: H 376/95 is uncharged at intestinal pH while \*\*\*melagatran\*\*\* is charged. H 376/95 is 170 times more lipophilic (octanol water partition coefficient) than \*\*\*melagatran\*\*\*. As a result, the permeability coefficient across cultured epithelial Caco-2 cells is 80 times higher for H 376/95 than for melagatran. Pharmacokinetic studies in healthy volunteers: H 376/95 is converted to \*\*\*melagatran\*\*\* in man. Oral bioavailability, measured as \*\*\*melagatran\*\*\* in plasma, is about 20% after oral administration of H 376/95, which is 2.7-5.5 times higher than after oral administration of \*\*\*melagatran\*\*\*. The variability in the area under the drug plasma concentration vs. time curve (AUC) is much smaller with oral H 376/95 (coefficient of variation 20%) than with oral \*\*\*melagatran\*\*\* (coefficient of variation 38%). Pharmacodynamic properties: H 376/95 is inactive towards human alpha-thrombin compared with \*\*\*melagatran\*\*\* [inhibition constant (K(i)) ratio, 185 times], a potential advantage for patients with silent gastrointestinal bleeding. In an experimental \*\*\*thrombosis\*\*\* model in the rat, oral H 376/95 was more effective than the subcutaneous low molecular weight heparin dalteparin in preventing \*\*\*thrombosis\*\*\*. Conclusion: By the use of the \*\*\*prodrug\*\*\*

principle, H 376/95 endows the direct \*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\*  
\*\*\*melagatran\*\*\* with pharmacokinetic properties required for oral  
administration without compromising the promising pharmacodynamic  
properties of \*\*\*melagatran\*\*\*.

L11 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:772474 CAPLUS

DOCUMENT NUMBER: 133:340244

TITLE: A pharmaceutical formulation comprising a low  
molecular weight thrombin inhibitor and its prodrug

INVENTOR(S): Gustafsson, David

PATENT ASSIGNEE(S): Astrazeneca AB, Swed.

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000064470	A1	20001102	WO 2000-SE756	20000419
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
SE 9901442	A	20001022	SE 1999-1442	19990421
BR 2000009847	A	20020108	BR 2000-9847	20000419
EP 1200118	A1	20020502	EP 2000-928047	20000419
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
AU 754405	B2	20021114	AU 2000-46336	20000419
JP 2002542298	T2	20021210	JP 2000-613460	20000419
EE 200100543	A	20030217	EE 2001-543	20000419
NO 2001005107	A	20011019	NO 2001-5107	20011019

PRIORITY APPLN. INFO.: SE 1999-1442 A 19990421  
SE 1999-4419 A 19991203  
WO 2000-SE756 W 20000419

OTHER SOURCE(S): MARPAT 133:340244

AB A pharmaceutical formulation contains a low mol. wt. \*\*\*thrombin\*\*\*  
\*\*\*inhibitor\*\*\*, or a pharmaceutically acceptable deriv. with an  
adjuvant, diluent or carrier; a pharmaceutical formulation including a  
\*\*\*prodrug\*\*\* of a low mol. wt. \*\*\*thrombin\*\*\* \*\*\*inhibitor\*\*\*,  
or a deriv. of that \*\*\*prodrug\*\*\*, in admixt. with an adjuvant,  
diluent or carrier. The formulation is suitable for administration in the  
treatment of a condition in which the inhibition of thrombin is required.  
A controlled, randomized, parallel group, Swedish multi-center pilot study  
was carried out. The study was open with regard to the drugs under  
evaluation but was blind for the patients, all personnel at the study  
sites, and for the person monitoring the expts. with regard to the doses  
of \*\*\*melagatran\*\*\* and the \*\*\*prodrug\*\*\* of \*\*\*melagatran\*\*\*,  
EtOOC-CH<sub>2</sub>-(R)Cgl-Aze-Pab-OH (I). A combination of s.c. administered  
\*\*\*melagatran\*\*\* and orally administered I is effective in preventing  
venous \*\*\*thrombosis\*\*\* after orthopedic surgery.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:506597 CAPLUS

DOCUMENT NUMBER: 127:136080

TITLE: Preparation of peptide derivatives as prodrugs of  
thrombin inhibitors

INVENTOR(S): Antonsson, Thomas; Gustafsson, David; Hoffmann,  
Kurt-Jurgen; Nystrom, Jan-Erik; Sorensen, Henrik;  
Sellen, Mikael

PATENT ASSIGNEE(S): Astra Aktiebolag, Swed.; Antonsson, Thomas;  
Gustafsson, David; Hoffmann, Kurt-Jurgen; Nystrom,



SOURCE: Jan-Erik Sorensen, Henrik; Sellen, Mikael  
PCT Int. Appl., 94 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9723499	A1	19970703	WO 1996-SE1680	19961217
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
ZA 9610353	A	19970623	ZA 1996-10353	19961209
CA 2238737	AA	19970703	CA 1996-2238737	19961217
AU 9712178	A1	19970717	AU 1997-12178	19961217
AU 706350	B2	19990617		
EP 869966	A1	19981014	EP 1996-943446	19961217
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
CN 1209139	A	19990224	CN 1996-180024	19961217
BR 9612148	A	19990713	BR 1996-12148	19961217
JP 2000504313	T2	20000411	JP 1997-523571	19961217
JP 3282821	B2	20020520		
EP 995755	A1	20000426	EP 1999-120315	19961217
EP 995755	B1	20010816		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
NZ 324902	A	20000623	NZ 1996-324902	19961217
JP 2001089498	A2	20010403	JP 2000-220423	19961217
AT 204292	E	20010915	AT 1999-120315	19961217
RU 2176644	C2	20011210	RU 1998-111148	19961217
ES 2163916	T3	20020201	ES 1999-120315	19961217
EE 4022	B1	20030415	EE 1998-187	19961217
US 5965692	A	19991012	US 1997-776231	19970131
NO 9802809	A	19980820	NO 1998-2809	19980618
US 6262028	B1	20010717	US 1999-353644	19990715
HK 1026214	A1	20020809	HK 2000-105419	20000830
US 2002142968	A1	20021003	US 2002-74008	20020214

PRIORITY APPLN. INFO.:  
GB 1995-26273 A 19951221  
SE 1996-556 A 19960215  
EP 1996-943446 A3 19961217  
JP 1997-523571 A3 19961217  
WO 1996-SE1680 W 19961217  
US 1997-776231 A1 19970131  
US 1999-353644 A1 19990715  
US 2000-708449 B1 20001109

OTHER SOURCE(S): MARPAT 127:136080  
AB Title compds. of formula R1O(O)C-CH2-(R)Cgl-Aze-Pab-R2 [wherein R1 = H, C1-10 alkyl, (un)substituted C1-3 alkylphenyl, AlC(O)N(R3)R4, AlC(O)OR3; (R)Cgl = (R)-cyclohexyl glycine; Aze = (S)-azetidine-2-carboxylic acid; Pab = 1-amidino-4-aminomethylbenzene; R2 (which replaces one of the hydrogen atoms in the amidino unit of Pab) = OH, OC(O)R5, C(O)OR6, C(O)OCH(R7)OC(O)R8; R3 and R4 are independently e.g., H, C1-6 alkyl, Ph, or together with the nitrogen atom represent pyrrolidinyl or piperidinyl; R5 = C1-17 alkyl, Ph, or 2-naphthyl (all of which are optionally substituted by C1-6 alkyl or halogen); R6 = (un)substituted 2-naphthyl, Ph, C1-3 alkylphenyl, C1-12 alkyl; R7 = H, C1-4 alkyl; R8 = e.g., 2-naphthyl, Ph, C1-6 alkoxy, (un)substituted C1-8 alkyl] or a pharmaceutically acceptable salt thereof, which are useful as prodrugs of inhibitors of trypsin-like proteases (no data), such as thrombin, and in particular in the treatment of conditions where inhibition of thrombin is required (e.g. thrombosis) or as anticoagulants, were prepd. For example, EtO2C-CH2-(R)Cgl-Aze-Pab-COOCH2CH:CH2 was prepd. via coupling of Me3CO2C-(R)Cgl-Aze-Pab-H with allyl chloroformate followed by Boc deprotection and coupling with Et bromoacetate. The title compds. were

all found to exhibit oral and/or parenteral bioavailability in rats as the active inhibitor HO2C-CH2-Cgl-Aze-Pab-H, either as the free acid and/or as one or more ester thereof.

=> d his

(FILE 'HOME' ENTERED AT 15:02:44 ON 27 MAY 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 15:03:08 ON 27 MAY 2003

```
L1      10904 S THROMBIN INHIBITOR
L2      514 S MELAGATRAN
L3      11005 S L1 OR L2
L4      68 S L3 (P) PRODRUG
L5      2981974 S KIT OR COMPOSITION
L6      0 S L4 (P) L5
L7      263691 S THROMBOSIS
L8      277 S THROMBOTIC CONDITION
L9      263784 S L7 OR L8
L10     13 S L9 (P) L4
L11     8 DUPLICATE REMOVE L10 (5 DUPLICATES REMOVED)
```

=> s l9 (p) surgery

```
L12     21370 L9 (P) SURGERY
```

=> s l11 (p) l12

```
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L83 (P) L74'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L85 (P) L75'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L87 (P) L76'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L89 (P) L77'
L13     3 L11 (P) L12
```

=> s l13 not l11

```
L14     0 L13 NOT L11
```

=> fd hsi

FD IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> d his

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L11     8 DUPLICATE REMOVE L10 (5 DUPLICATES REMOVED)
L12     21370 S L9 (P) SURGERY
L13     3 S L11 (P) L12
L14     0 S L13 NOT L11
```

=> log y

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE

ENTRY

34.82

TOTAL

SESSION

35.03

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

CA SUBSCRIBER PRICE

ENTRY

SECTION

-3.26

3.26

STN INTERNATIONAL LOGOFF AT 15:06:24 ON 27 MAY 2003